California Environmental Protection Agency
Air Resources Board
Planning and Technical Support Division

December 2011

2011 Meteorological Data DVD Number: PTSD-2011-034-DVD

CONTENTS OF THIS README FILE

I. Introduction

The Air Quality and Meteorological Information System (AQMIS) is a web-based source for real-time and official air quality and meteorological data. The 1969-2011 meteorological data (partial months for 2011) on this version of the DVD were extracted from AQMIS on 10/6/2011. The meteorological data were zipped by year for all 23 parameters. This DVD contains both official and preliminary (preliminary data included from 2009-2011) meteorological data. Valid data are represented by quality flag of 0 and 1. The 2011 Meteorological Data DVD replaces the 2010 Meteorological Data DVD (PTSD-2010-032-DVD).

The Internet address for AQMIS is:
http://www.arb.ca.gov/airqualitytoday/

II. Quality Flag Definitions:

Quality Flag	Definition
0	Valid observation
1	The data supplier marked the observation as suspect - but it is still valid
2	The automated qa routine judged the observation questionable and invalid
3	The automated qa routine judged the observation invalid
4	The data supplier flagged the observation invalid
5	The observation was manually flagged invalid

III. Data Limitations

This DVD contains both official and preliminary (preliminary data included from 2009-2011) meteorological data. During the quality assurance (QA) process the South Coast Air Quality Management District (SCAQMD) determined the 2005-2011 wind speed and wind direction data were inaccurate and therefore directed the Air Resources Board to invalidate these data. We invalidated all the 2005-2011 wind speed and wind direction data from the SCAQMD, including Palm Springs-Fire Station (site 2199)and Indio Jackson Street (site 2878) where the met_source = AIRS by setting the quality flag equal to 5 and removing the data.

Additionally, the “minutes” field is filled by -99 when there were no “minutes” data available. Please only use the valid data where quality flag is 0 or 1. The quality flag column in the data file is denoted by “quality”.

IV. Description of the Meteorological Data Files on the DVD

The first part of the file name is parameter and is followed by year of data. All files have similar data structure.
Yearly data for one parameter are in one file. File name "otemp2010" means temperature data for year 2010.
All data files for a year are zipped (*.zip). The total database size is 46 Gb.
The preliminary site file is semicolon quote delimited (txt) and will be updated in ARB's database in the future.
Data include preliminary data (source= "-1"). Null values are kept blank. Data are separated by a "pipe" = '|' .
Column headers are: site, date, start_hour, minutes, obs, quality, source, met_source, and obs_type
Column 'source' shows the source database (-1: AQMIS; 4:MET).
Column 'met_source' shows the source of met data (AIRS, CIMIS, RAWS, NOAA etc.)
Column 'obs_type' shows the obs_type as specified in the obs_type.xls table and in this PDF document.
Data are snapshots from the data tables in merged database as of the date of extraction.

Data Extracted on: 10/6/2011

Description of Met Parameter Data

Data Table	Met Parameter	Unit	Data Frequency	Database has Data Since
bar_press	Barometric Pressure	mb	Hourly	1/1/2008
dp	Dew Point	degC	Hourly	12/31/1969
eto	Evapotransportation	mm	Hourly	5/30/1982
ftemp	Fuel Temperature	degC	Hourly	1/23/1985
net_rad	Net Radiation	w/m2	Hourly	5/30/1982
otemp	Ambient Temperature	degC	Hourly	12/31/1969
precip	Precipitation	mm	Hourly	12/31/1969
rh	Relative Humidity	percent	Hourly	5/30/1982
seasuf_temp	Sea Surface Temperature	degC	Hourly	7/16/1975
sigmatheta	Std. Dev. Of Wind Direction	degrees	Hourly	5/30/1982
sky_cover	Sky Cover	percent	Hourly	NA*
slpress	Sea Level Pressure	mb	Hourly	12/31/1969
soiltemp	Soil Temperature	degC	Hourly	5/30/1982
sol_rad	Solar Radiation	w/m2	Hourly	5/30/1982
stat_press	Station Pressure	mb	Hourly	7/16/1975
uv_rad	Ultra Violet Radiation	w/m2	Hourly	1/1/2008
vaporp	Vapor Pressure	mb	Hourly	5/30/1982
wd	Resultant Wind direction	deg	Hourly	7/16/1975
wd_peak	Wind Direction - Peak	deg	Hourly	NA*
wd_scalar	Wind Direction - Scalar	deg	Hourly	12/31/1969
ws	Resultant Wind Speed	m/s	Hourly	7/16/1975
ws_peak	Wind Speed - Peak	m/s	Hourly	9/30/1979
ws_scalar	Wind Speed - Scalar	m/s	Hourly	12/31/1969

* NA - Not Available
PTSD/AQSS/10-11-2011

V. Definitions of obs_types for this Meteorological DVD

obs_type	definition
A06	Average over 6 minutes
A08	Average over 8 minutes
A10	Average over 10 minutes
A15	Average over 15 minutes
A60	Hourly average
C60	Cumulative over 60 minutes as in rainfall
D	24 hour Daily Average
H	Hourly value
I	Instantaneous value
I00	Instantaneous value
I02	Instantaneous value over 2 minutes
S00	FAA special observation other than the routine hourly observation, Instantaneous value

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VI. Acknowledgments

This DVD was produced by the Air Quality and Statistical Studies Section of the California Air Resources Board, Planning and Technical Support Division, Air Quality Data Branch. Many people contributed to this DVD. Dennis King under the direction of Pingkuan Di, manager of the Meteorology Section in the Modeling and Meteorological Branch, administered the meteorological database (Merckx). Bob Weller, Xiaomang Pan, and John Rynearson under the direction of Mena Shah, manager of the Air Quality and Statistical Studies Section performed the principal tasks in preparing the data files and assembling the 2011 Meteorological Data DVD.